

So basically the difference between the two concepts is what the blade tension is trying to do: Hold the blade in the handle or open the blade from the handle. (Gravity doesn't open a folding knife with a Bias to be closed because gravity doesn't overcome the bias.)

This concept is important as it makes a distinction between not only the knives but the fundamental difference in the thought process that goes into the design of the two types of knives.

With the exception of switchblades, virtually all folding knives feature a "Bias toward Closure". Since the Federal Switchblade Act prohibited Switchblades and Gravity knives in 1958, all manufacturers produce folding knives for the general public that have a "Bias toward Closure". Knives that lose the "Bias toward Closure" are considered defective and will be replaced, repaired, or adjusted.

Opening Folding Knives with a "Wrist Flick"

You advised me that the NYPD and the New York County DA's office has interpreted the New York Penal Law's prohibition on gravity knives to include folding knives that lock in the open position, if those knives can be opened using a "wrist flick test". This "wrist flick test" involves holding the body of a folding knife in one hand and then forcefully flicking or snapping the knife downward, in an attempt to thereby open the blade of the folding knife to its open position. If a NYPD officer or DA's Office investigator is able to open a folding knife in this manner, then they will assert that the knife is a gravity knife, as defined in the New York Penal Law. You asked me to advise you whether folding knives are designed and intended to be opened in this manner.

Folding knives generally may be opened with two hands; one grasping the handle and the other grasping the blade and moving it to the open position. Some folding knives have a stud/ protrusion or hole on the

blade that allows a person to use either their free hand, or the thumb of the hand holding the knife, to open the blade to the open position.

Folding Knives are neither designed nor intended to be opened with a wrist flick. This motion is dangerous to those around the person opening the knife in this way. The risk of the knife flying from the hand and causing damage and injury is great and so it is not recommended as a safe opening method. All knives are potentially dangerous and opening them with gross motions like the "wrist flick" constitutes serious neglect on the part of the user.

The motion also puts tremendous strain and impact on the knife construction; damaging the locking, pivoting and stabilizing mechanisms. From time to time, people have returned knives to KA-BAR that exhibit damage from "Wrist Flicking". They are repaired but the user is advised against continued opening in this manner.

You also asked me to state whether the "wrist flick test" interpretation of the gravity law coincides with the understanding of New York knife makers. It is potentially possible to open any folding knife using a "wrist flick" motion. Therefore, under this standard, virtually all folding knives produced by both U.S. and foreign makers (KA-BAR included) would potentially be illegal. In turn, all knife makers would have been in open violation of New York criminal law for many years.

I believe, and this is my opinion, that the "wrist flick test" is a misinterpretation of the term "Centrifugal force" as defined by the New York State Penal law which I will address later in this report.

Other Factors that influence the "Wrist Flick Test" on folding knives

You asked me to explain any considerations that impact the extent to which a folding knife resists opening, which in turn would impact the consistency of the "wrist flick test". While different people obviously have significantly different physical abilities in terms of strength and skill, I discuss factors that would impact consistency between knives themselves. There are several types of considerations that would substantially affect the ability to "wrist flick" a folding knife to the open position. They are:

- 1) Design, materials and construction of a particular make and model of knife.
 - a. Design: Different locking mechanisms will all have a different resistance to opening and closing of the blade. i.e.; a lock back will have different characteristics than a liner lock. Knives with bearing washers will open differently than knives without washers.
 - b. Materials: Different materials will have different properties. These include weight, frictional co-efficiency (lubricity), and finishing characteristics.
 - c. Construction: Different construction methods will produce different fits and finishes and as a result, different ease of knife operation.

Each manufacturer designs knives to a particular price range. This will determine the materials, the methods and design of how this knife will perform. All of these requirements will determine the outcome of the knife. The knife shape, weight, color and ease of operation are determined

by the design, material, and construction methods. Each company will produce knives that are different. The knife industry as a general rule works diligently and in good faith to produce knives that are safe and practical as tools. New materials and designs are meant to enhance the usefulness of this tool.

2) Manufacturing variances between individual knives of the same make and model.

Material and operations both have variances in dimensions and specifications. This is always present in any manufacturing operation. No two folding knives on a production line will have the exact same mechanical characteristics. This affects the outcome of all knife mechanisms. Manufacturing tolerances and variances in moving parts of a folding knife will vary to the extent that one person performing the “wrist flick test” may pass some knives while other knives of the same model knife fail at the same time.

Custom knife makers who spend the time to produce more perfect knives can actually make folding knives that have a “bias to be closed” but due to the polished surfaces, operate so smoothly they would more likely fail the “wrist flick test” because of the reduced friction between the blade and bearing surfaces. These knives are expensive and may cost thousands of dollars.

3) “Wear and Tear” on a knife over time.

Knives wear through use, so that the normally tight tolerances of a new knife are no longer present. Normally, all things being equal, a folding knife becomes somewhat easier to open over time. This means that a folding knife will generally become easier to “wrist flick” over time.

4) The potential presence of an adjusting screw which can be adjusted.

Some models of folding knives are assembled with threaded fasteners at the pivot point of the blade. This fastener can be adjusted for tightness and looseness and it directly impacts the extent of a knife’s resistance to opening. Over time, the fasteners can loosen which also affects the ease or resistance to opening.

Centrifugal Force Discussion

You have also asked me to discuss centrifugal force, and specifically, whether the “wrist flick” maneuver is an example of centrifugal force. We will say that Centrifugal force is defined:

Centrifugal force n 1: the force that tends to impel a thing or parts of a thing outward from a center of rotation. 2: the force that an orbiting body exerts on the object constraining it. Merriam-Webster Dictionary. 1974, pg.126

An example of Centrifugal Force is the following: If a person sits in a swivel chair and holds a gravity knife so that the opening of the knife handle is pointed outward, away from their body and they rotate the chair seat so that they spin around on the chair frame, when they release the knife locking mechanism, the blade, by the rotating force of the chair, will be pulled out of the handle and into the

open position. No other movement other than the rotating chair has influenced or acted upon the knife. That is a blade opening by the “application of centrifugal force.” (as illustrated above)

If a person performs this same maneuver with a slip joint, lock back or liner lock type folding knife, the blade in these knives will not open, under any realistic set of circumstances, because there is sufficient force designed and built into the knife (“bias to be closed”) to overcome centrifugal force. Therefore it is safe to say that these knives do not fall under the “Bias to be opened” rule and also do not fall under the gravity knife definition as the application of centrifugal force will not open the knife.

The “wrist flick test” is not a true test for centrifugal force. The motion described by the “wrist flick” has two components. The first is centrifugal force which is imparted during the initial arm and wrist movement. The blade typically does not move from its closed position in the handle during this motion (application of centrifugal force) due to the bias to be closed. However, the second part of the motion is the sudden stopping of the arm and wrist that stops the knife handle. Inertia then makes the blade move to the open position. It is this sudden stopping of the blade and the inertia of the blade continuing to move, not centrifugal force, which opens the blade. If these same knives are given the “Swivel Chair test”, they will be legal knives. However, a traditional gravity knife could be opened using the “swivel chair test” because the blade does not have any bias toward closure and does not open on a pivot. A relatively small amount of centrifugal force would cause the blade to open.

Explanation of Assisted-Opening Knife Mechanisms

You asked to me to explain the basic nature of “assisted-opening knives, and to provide my opinion about whether assisted-opening knives qualify as switchblade knives.

An assisted-opening knife is a folding knife that uses a spring mechanism to complete the manual opening of the blade. The first part of the opening sequence is the blade being moved by the hand to a partial open position. The final part of the opening sequence is a spring opening the blade to the open position.

The assisted opening knife follows the “Bias to be closed” rule that legal knives follow. The spring mechanism holds the blade in the handle. The blade must be manually manipulated to begin the opening motion. After approximately 30-45 degrees of blade rotation, the spring that holds the blade in the handle reverses the pressure on the blade and rotates it to the final open position.

My opinion is that an assisted opening knife is clearly not a switchblade knife. The conventional definition of a switchblade requires that it opens by means of a button, spring, or device that is mounted in the handle.

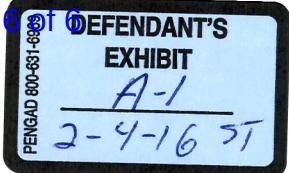
The NYS Legal Definition is basically the same and requires that the blade “open automatically by using hand pressure applied to a button, spring or other device *in the handle*. “

An assisted opening knife does not meet this definition.

Closing

In closing, I would like to state that switchblades, gravity knives and other "illegal" knives are clearly and distinctly different than the legal knives being produced today. New York City's interpretation of the "Gravity knife" law to include folding knives that resist opening is totally inconsistent with the understanding that KA-BAR and other knife companies have had since the 1950s.





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January 7, 2016

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ADDENDUM

Dear Mr. Schmutter,

As per your request, the following letter is an addendum to the letter I originally wrote on February 1, 2013 to Mr. David Jensen, Esq.

Since that time, there has been a change to my employment status.

I am now working for Ontario Knife Company, Franklinville, NY. My second Ontario tenure started on Dec of 2013 as Director of Engineering.

I am now presently the Vice President of Engineering.

This includes management of both the Engineering and Quality Departments.

In addition, my responsibilities also include oversight and review of manufacturing processes, weekly and monthly financial reviews, personnel issues, ISO Certification and other company functions.

Ontario Knife Company is a 127 year old Knife Manufacturer based in Franklinville, NY. It was formed in Naples, Ontario County, New York in 1889 by William Ensworth, Charles Albert Brace, and William Maudsley. Ontario Knife moved to its present location in Franklinville, NY in 1902 and was incorporated at that time.

Ontario Knife Manufactures full lines of Cutlery and Tools for Consumer, Commercial and Government use.

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